



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,185	01/21/2004	Kia Silverbrook	MPA14US	2071
24011	7590	11/18/2005	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			GOLDBERG, BRIAN J	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,185

Applicant(s)

SILVERBROOK ET AL.

Examiner

Brian Goldberg

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/3/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: fluid distribution stack 500, and possibly others. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 6 is objected to because of the following informalities: It is not fully clear from the specification what is meant by "fluid distribution member", since this phrasing is not used within the body of the specification. Also, it is not clear what "respective ones" is referring to in the second to last line of the claim. Appropriate correction is required.
3. Claims 2 and 6 are objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2 recites the limitation "the electrical connector" in line 3 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Claim 6 recites the limitation "the fluid distribution members" in the last two lines of the claim. There is insufficient antecedent basis for this limitation in the claim, since it is only referred to in the singular as "at least one fluid distribution member" prior to this reference.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook et al. (WO 2001/042026).

6. Regarding claim 1, Silverbrook et al. disclose "at least one printhead module (10 of Fig 2) comprising at least two printhead integrated circuits (18 of Fig 4), each of which has nozzles formed therein for delivering printing fluid onto the surface of print media (pg 5 ln 19), and a support member (16 of Fig 7) supporting and carrying the printing fluid for the at least two printhead integrated circuits; and a casing (14 of Fig 3) comprising a support frame (64, 94 and 32 and 76 about 16 of Fig 2) for supporting the at least one printhead module and a cover portion (28 of Fig 6) which is removably attached to the support frame (pg 4 ln 12-13)."

7. Regarding claim 2, Silverbrook et al. disclose "drive electronics (54 of Fig 7) are provided for driving the at least two printhead integrated circuits of the at least one

Art Unit: 2861

printhead module via the electrical connector (48 of Fig 8); and the support frame (64 of Fig 2) further supports the drive electronics (see Fig 2)."

8. Regarding claim 3, Silverbrook et al. disclose "wherein the cover portion (28 of Fig 6) is arranged to shield the drive electronics (54 of Fig 7) from electromagnetic interference." As can be seen best in figures 2 and 5, the cover portion covers 54, which provides a shield from interference.

9. Regarding claim 6, Silverbrook et al. disclose "the at least one printhead module (10 of Fig 2) is formed as a unitary arrangement of the at least two printhead integrated circuits (18 of Fig 4), the support member (16 of Fig 7), at least one fluid distribution member (26 of Fig 7) mounting the at least two printhead integrated circuits to the support member, and an electrical connector (48, 22 of Fig 8) for connecting electrical signals to the at least two printhead integrated circuits (pg 3 ln 17); and the support member has at least one longitudinally extending channel (80 of Fig 7) for carrying the printing fluid for the printhead integrated circuits and includes a plurality of apertures (42 of Fig 7) extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (see Fig 7 and pg 5 ln 19)."

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. in view of Wakabayashi et al. (US 5615085). Silverbrook et al. disclose the claimed invention as set forth above with respect to claim 2. Thus Silverbrook et al. meets the claimed invention except “wherein the cover portion comprises fin portions arranged on an outer surface thereof...so as to be adjacent the drive electronics” and “wherein the cover portion further comprises a heat coupling material portion arranged on an inner surface thereof.”

12. Wakabayashi et al. teach “wherein the cover portion comprises fin portions arranged on an outer surface thereof (col 13 ln 53-61 and col 14 ln 1-6)” and “wherein the cover portion further comprises a heat coupling material portion arranged on an inner surface thereof (102 of Fig 1 and col 10 ln 4-9).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide fin portions and a heat coupling material. One would have been motivated to so modify Silverbrook et al. for the benefit of improving heat dissipation of the electronics by increasing the efficiency of heat removal with the heat coupling material and increasing the surface area with the fins, which more efficiently cools the electronics, as stated by Wakabayashi et al.

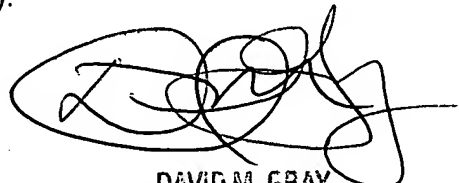
Art Unit: 2861

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goldberg whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJG



DAVID M. GRAY
PRIMARY EXAMINER